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1205 North Kings Highway
Cherry Hill, New Jersey 08034
856-429-4100
September 9, 1999

In re: Patent Application of
Frank Pelosi, Jr.
Our File No. 4451-18

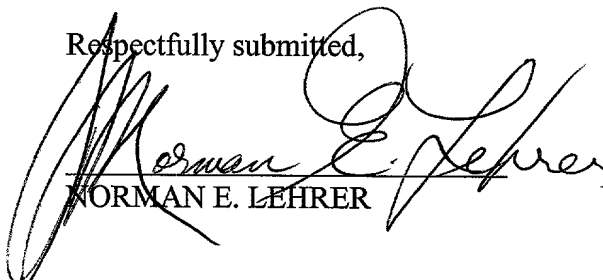
Box Patent Application
Assistant Commissioner for Patents
Washington, DC 20231

Sir:

On behalf of the Applicant, we are pleased to present herewith application for Letters Patent entitled "Dimensionally Stable Adhesive Floor Covering System" comprising the specification, claims, declaration, petition and power of attorney and three paper copies of two sheets of formal drawings. Also enclosed are two original verified statements claiming small entity status.

We are enclosing herewith our check in the amount of \$380 for the filing fee. Please charge any deficiency or credit any overpayment of this fee to the undersigned's deposit account No. 12-1023.

Respectfully submitted,


NORMAN E. LEHRER

Applicant or Patentee: Frank Pelosi, Jr. Attorney's 4451-18
Serial or Patent No.: _____ Docket No.: _____
Filed or Issued: _____
For: Dimensionally Stable Adhesive Floor Covering System

VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY
STATUS (37 CFR 1.9 (f) and 1.27 (b)) — INDEPENDENT INVENTOR

As a below named inventor, I hereby declare that I qualify as an independent inventor as defined in 37 CFR 1.9 (c) for purposes of paying reduced fees under section 41 (a) and (b) of Title 35, United States Code, to the Patent and Trademark Office with regard to the invention entitled "Dimensionally Stable Adhesive Floor Covering System" described in

☒ the specification filed herewith
☐ application serial no. _____, filed _____
☐ patent no. _____, issued _____

I have not assigned, granted, conveyed or licensed and am under no obligation under contract or law to assign, grant, convey or license, any rights in the invention to any person who could not be classified as an independent inventor under 37 CFR 1.9 (c) if that person had made the invention, or to any concern which would not qualify as a small business concern under 37 CFR 1.9 (d) or a nonprofit organization under 37 CFR 1.9 (e).

Each person, concern or organization to which I have assigned, granted, conveyed, or licensed or am under an obligation under contract or law to assign, grant, convey, or license any rights in the invention is listed below:

☐ no such person, concern, or organization
☒ persons, concerns or organizations listed below*

*NOTE: Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 CFR 1.27)

FULL NAME Relay, L.L.C.
ADDRESS 625 E. Chapel Avenue, Cherry Hill, NJ 08034
☐ INDIVIDUAL ☐ SMALL BUSINESS CONCERN ☐ NONPROFIT ORGANIZATION

FULL NAME _____
ADDRESS _____
☐ INDIVIDUAL ☐ SMALL BUSINESS CONCERN ☐ NONPROFIT ORGANIZATION

FULL NAME _____
ADDRESS _____
☐ INDIVIDUAL ☐ SMALL BUSINESS CONCERN ☐ NONPROFIT ORGANIZATION

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28 (b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

FRANK PELOSI, JR.

NAME OF INVENTOR NAME OF INVENTOR NAME OF INVENTOR

Signature of Inventor Signature of Inventor Signature of Inventor

Date Date Date

Applicant or Patentee: Frank Pelosi, Jr. Attorney's
Serial or Patent No.: _____ Docket No.: 4451-18
Filed or Issued: _____
For: Dimensionally Stable Adhesive Floor Covering System

VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY
STATUS (37 CFR 1.9 (f) and 1.27 (c)) — SMALL BUSINESS CONCERN

I hereby declare that I am

- ☐ the owner of the small business concern identified below;
☒ an official of the small business concern empowered to act on behalf of the concern identified below;

NAME OF CONCERN Relay, L.L.C.

ADDRESS OF CONCERN 625 E. Chapel Avenue
Cherry Hill, NJ 08034

I hereby declare that the above identified small business concern qualifies as a small business concern as defined in 13 CFR 121.3-18, and reproduced in 37 CFR 1.9 (d), for purposes of paying reduced fees under section 41(a) and (b) of Title 35, United States Code, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention, entitled "Dimensionally Stable Adhesive Floor Covering System" by inventor(s) Frank Pelosi, Jr. described in

☒ the specification filed herewith

☐ application serial no. _____, filed _____

☐ patent no. _____, issued _____

If the rights held by the above identified small business concern are not exclusive, each individual, concern or organization having rights to the invention is listed below* and no rights to the invention are held by any person, other than the inventor, who could not qualify as a small business concern under 37 CFR 1.9 (d) or by any concern which would not qualify as a small business concern under 37 CFR 1.9 (d) or a nonprofit organization under 37 CFR 1.9 (e).

*NOTE: Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 CFR 1.27)

NAME _____

ADDRESS _____

☐ INDIVIDUAL

☐ SMALL BUSINESS CONCERN

☐ NONPROFIT ORGANIZATION

NAME _____

ADDRESS _____

☐ INDIVIDUAL

☐ SMALL BUSINESS CONCERN

☐ NONPROFIT ORGANIZATION

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28 (b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

NAME OF PERSON SIGNING: Frank Pelosi, Jr.

TITLE OF PERSON OTHER THAN OWNER President

ADDRESS OF PERSON SIGNING 625 E. Chapel Avenue
Cherry Hill, NJ 08034

SIGNATURE Frank Pelosi Jr.

DATE 9/1/99

DIMENSIONALLY STABLE ADHESIVE FLOOR COVERING SYSTEM

Background of the Invention

The present invention is directed toward a system for installing a floor covering, such as a carpet, on a pre-existing carpet or floor and more particularly, toward a system which includes a sheet which prevents the floor covering from moving when the covering is installed.

Generally speaking, laying broadloom is often a difficult process, mainly because the carpet itself is not completely dimensionally stable. That is, when one walks across broadloom carpet that has been installed, it can shift in lateral directions or stretch. One method for laying broadloom carpet on a floor is by first applying an adhesive to the floor which bonds the carpet to the floor, thereby improving the stability. Another method involves an adhesive carrier which looks like a large, flexible screen and has pressure sensitive adhesive on both sides. The screen is adhered to the floor and the carpet is then unrolled directly on top of the screen. However, this procedure does not add any stability and requires special procedures to keep the carpet from moving or stretching.

Using carpet tiles is also another method for installing broadloom carpet but is undesirable. That is, because broadloom carpet is itself dimensional unstable, one cannot create carpet tiles by simply cutting broadloom since the tiles would also become dimensionally unstable. Therefore, carpet tiles must be specially made. This is

done by applying dimensionally stable backing materials to the back of the broadloom carpet and then cutting the carpet into large squares. This, however, is an expensive procedure.

Existing systems for installing broadloom carpet or carpet tiles over existing carpet rely on aggressive hot melt seaming tape or aggressive pressure sensitive seaming tapes to join pieces, to stop growth in traffic lanes, to stop shifting of carpet, and to stop deterioration of the edges; all of which occurs from the inability of the tape to eliminate stretch and flex at the edges of the carpet. Additionally, existing tapes will grow and stretch when subject to heavy rolling traffic. The hot melt tape physically bonds the top carpet to the carpet underneath. This eliminates the seam problem; however, it can cause lumps and is impractical if the carpet is to be cut into small pieces.

U.S. Patent No. 5,763,040 to Murphy et al. discloses a carpet underlay comprising a fibrous, non-woven fabric and having an adhesive applied to one or both sides of the underlay. The underlay is applied to the underside of a carpet and the carpet is then laid on a floor. This patent discloses that the underlay is first adhered to the carpet, however, this underlay does not add or improve the dimensional stability of the products involved.

Summary of the Invention

The present invention is designed to overcome the deficiencies of the prior art discussed above. It is an object of this invention to provide a system for installing a floor covering on a floor or pre-existing carpet.

It is another object of the present invention to provide dimensional stability to carpet tiles.

It is a further object of the present invention to provide dimensional stability to broadloom carpet.

In accordance with the illustrative embodiments demonstrating features and advantages of the present invention, there is provided a system for installing carpet including a sheet which essentially includes a non-woven backing with adhesive on both the top and bottom sides of the backing. Release paper is placed on the adhesive on a side of the backing. When the carpet is ready to be installed the release paper from the bottom side of the backing is removed so that the bottom side of the backing may be applied to a pre-existing floor or carpet. A carpet tile or carpet may then be placed on the top side of the backing. Alternatively, the sheet may be a thin, flexible plastic material with adhesive on both the top and bottom sides.

Other objects, features, and advantages of the invention will be readily apparent from the following detailed description of a preferred embodiment thereof taken in conjunction with the drawings.

Brief Description of the Drawings

For the purpose of illustrating the invention, there is shown in the accompanying drawings one form which is presently preferred; it being understood that the invention is not intended to be limited to the precise arrangements and instrumentalities shown.

Figure 1 is a top perspective view of the sheet of the present invention being placed on a pre-existing carpet;

Figure 2 is a bottom perspective view of the sheet of the present invention;

Figure 3 is an exploded view showing the placement of a carpet tile on the sheet of the present invention;

Figure 4 is a top perspective view of the sheet of the present invention;

Figure 5 is perspective view of a carpet having carpet tiles placed thereon; and

Figure 6 is a cross-sectional view of the carpet having carpet tiles placed thereon taken through the line 6-6 of Figure 5.

Detailed Description of the Preferred Embodiment

Referring now to the drawings in detail wherein like reference numerals have been used throughout the various figures to designate like elements, there is

shown in Figure 4 a dimensionally stable sheet constructed in accordance with the principles of the present invention and designated generally as 10.

The dimensionally stable sheet of the present invention essentially includes a flexible backing 12 with a top side 14 and a bottom side 16. An adhesive 18 may be applied to the top side 14 and an adhesive 20 may be applied to the bottom side 16 of the backing 12. Alternatively, an adhesive may be applied to only one side of the backing. Release paper 22 is placed on the adhesive 18 of the top side 14 and release paper 24 is placed on the adhesive 20 of the bottom side 16 of the backing 12. The release paper 22 and 24 may be waxed and is of the type typically known and used in the art.

The adhesive is preferably a pressure sensitive adhesive, however, other adhesives well known in the art may be used. Also, the adhesive applied to the top side 14 of the backing 12 may be different from the adhesive applied to the bottom side 16 of the backing 12. The adhesive may be compatible with vinyl, which is often secured to the back of carpet, in order to avoid plasticizer migration. For example, the adhesive may be a non-oxidizing pressure sensitive adhesive comprising a permanently tacky modified acrylic vinyl acetate-ethelyne copolymer material. The adhesive may also be a synthetic rubber pressure sensitive adhesive.

The backing 12 is a fibrous and non-woven material. It is generally not in a grid pattern. The backing 12 may be made from a non-woven plastic film such as the non-woven, spun-bonded polyethylene film sold under the trade name Tyvek and manufactured by E. I. du Pont de Nemours and Company, Wilmington, Delaware. The

backing may also be made from Tytar which is a spun-bonded, non-woven fabric of polypropylene composed of randomly arranged, continuous filament fibers bonded at filament cross-over points available from Norville Industrials, Dalton, Georgia.

Alternatively, the backing may be made from a thin, flexible but dimensionally stable plastic material, such as Mylar. Preferably, when the backing is made from Tyvek, Tytar, or similar material, the backing has a thickness of less than 10 mils and more preferably, less than 6 mils so that the same functions solely as a dimensional stabilizer rather than functioning to add additional padding or the like. When the backing is made from Mylar or similar material, the backing has a thickness of approximately 1-2 mils, and preferably, approximately 1 mil.

In order to use the sheet 10 of the present invention, the release paper 24 from the bottom side 16 of the backing 12 is removed. The bottom side 16 of the backing 12 is then placed on an existing carpet or cushion 26 or any subfloor, such as a concrete floor. (If the sheet is being placed on pre-existing carpet 26, a foam back 28 may exist below the carpet 26.) The release paper 22 on the top side 14 of the backing 12 is removed as carpet tiles 30a, 30b, and 30c, for example, are placed on the adhesive 18 of the top side 14 of the backing 10. The result is a floor 32 having a pre-existing carpet 26 covered with carpet tiles as seen in Figure 5. In this manner, the pre-existing carpet 26 becomes dimensionally stable and is impervious to movement which takes place on the carpet tiles. Thus, with the present system it is possible to install cut pieces, or tiles, of broadloom carpet over flexible subfloors such as existing carpet or

cushion. It is also possible to install large sheets of broadloom carpet, instead of carpet tiles, on a subfloor.

The sheet of the present invention may be cut into any desired length and width and may be rolled for ease in transportation and placement so that the same may be unrolled as needed or used. When the sheet is rolled, only one side of the sheet needs to be covered with release paper.

The present invention may be embodied in other specific forms without departing from the spirit or essential attributes thereof and accordingly, reference should be made to the appended claims rather than to the foregoing specification as indicating the scope of the invention.

I CLAIM:

1. A method of applying a carpet to a subfloor comprising the steps of:

providing a dimensionally stable sheet having a backing with a top side and a bottom side, said backing being made from a material and having adhesive applied to at least one of said top or bottom sides;

placing said sheet on an existing subfloor;

providing a carpet; and

placing said carpet on said sheet.

2. The method of applying a carpet to a subfloor claimed in Claim 1 wherein said adhesive is applied to both top and bottom sides of said backing.

3. The method of applying a carpet to a subfloor claimed in Claim 2 further including the step of placing release paper on at least one of said top or bottom sides of said backing.

4. The method of applying a carpet to a subfloor claimed in Claim 3 further including the step of removing said release paper from said backing.

5. The method of applying a carpet to a subfloor claimed in Claim 2 wherein the adhesive applied to said top side of said backing is different from the adhesive applied to said bottom side of said backing.

6. The method of applying a carpet to a subfloor claimed in Claim 1 wherein said carpet is a carpet tile.

7. The method of applying a carpet to a subfloor claimed in Claim 1 wherein said subfloor is an existing carpet.

8. The method of applying a carpet to a subfloor claimed in Claim 1 wherein said subfloor is a concrete floor.

9. The method of applying a carpet to a subfloor claimed in Claim 1 wherein said backing is made from a spun-bonded, non-woven fabric having a thickness of approximately 8 mils.

10. The method of applying a carpet to a subfloor claimed in Claim 1 wherein said backing is made from a thin, flexible plastic material having a thickness of approximately 1 mil to approximately 2 mils.

Dimensionally Stable Adhesive Floor Covering System

Abstract of the Disclosure

A system for installing carpet including a sheet which essentially includes a non-woven or flexible plastic backing with adhesive on both the top and bottom sides of the backing is disclosed. Release paper is placed on the adhesive on at least one side of the backing. When the carpet is ready to be installed the release paper from the side of the backing is removed so that the backing may be applied to a subfloor which may be a floor or pre-existing carpet. A carpet tile or carpet is placed on the top side of the backing. Thus, the present system provides dimensional stability to carpet tiles or carpet and to the existing subfloor.

Fig. 1

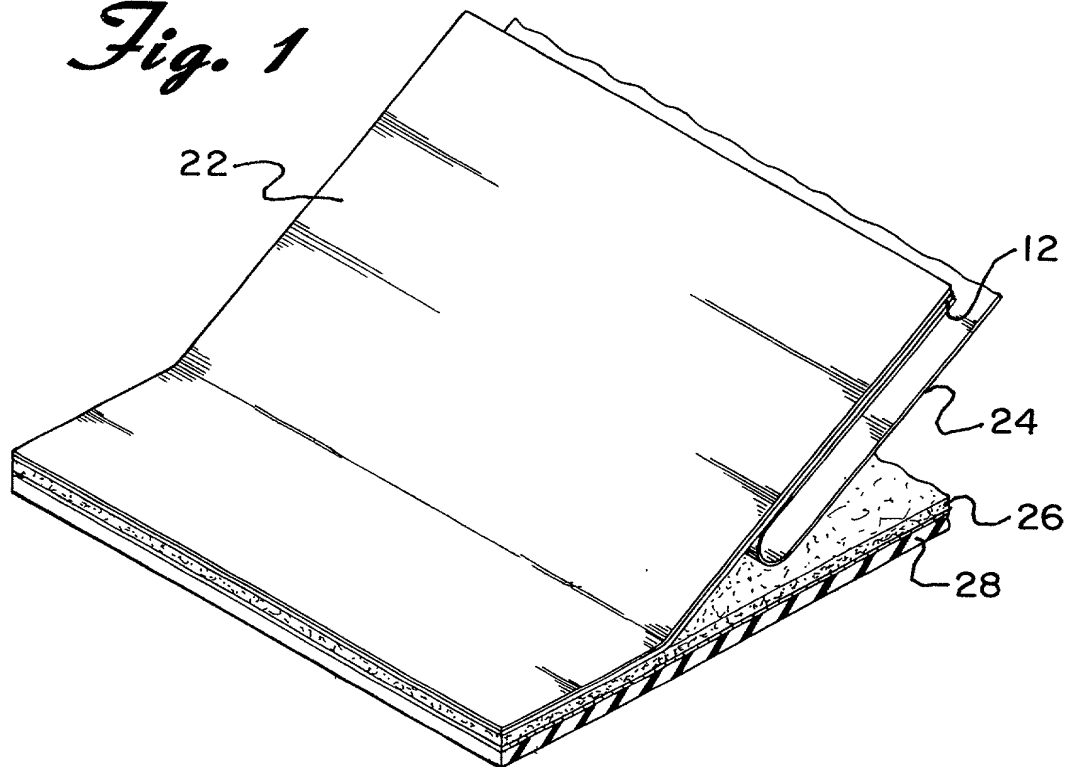


Fig. 2

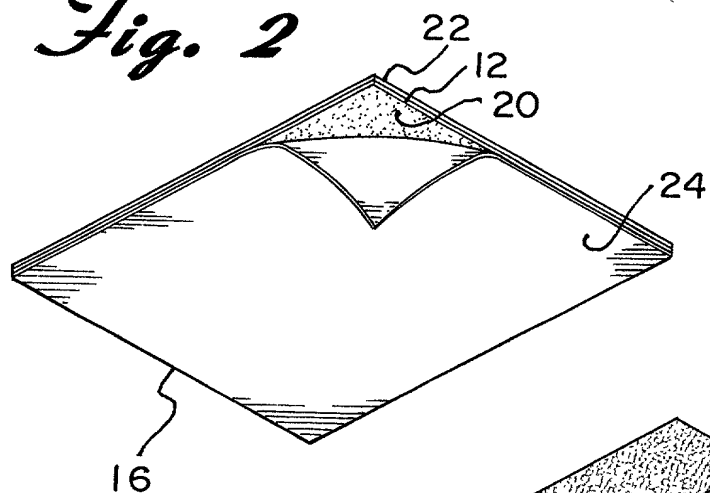


Fig. 3

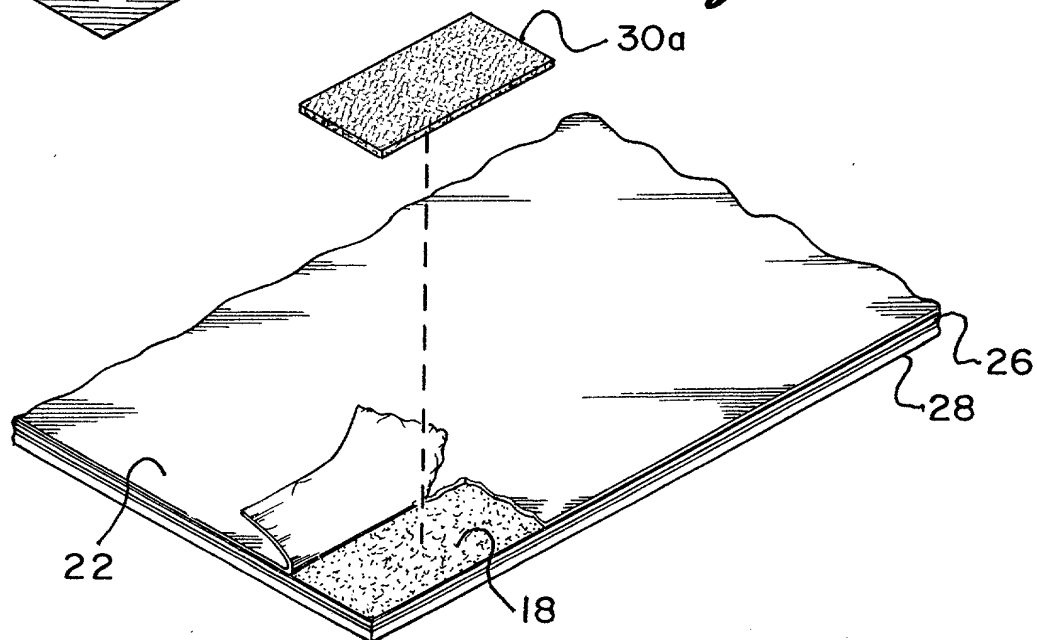


Fig. 4

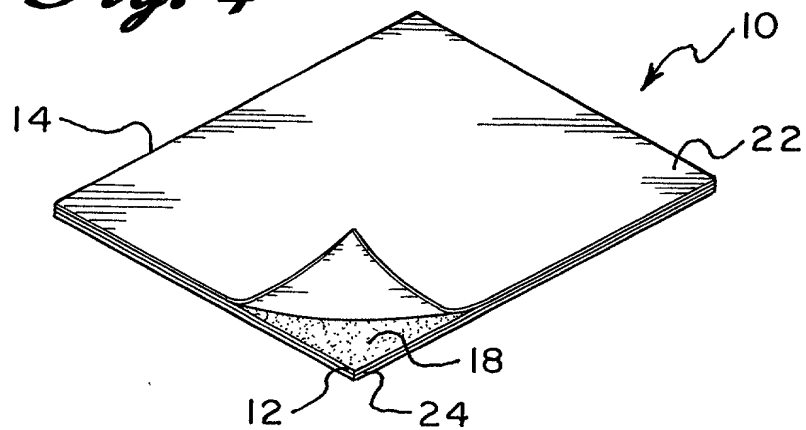


Fig. 5

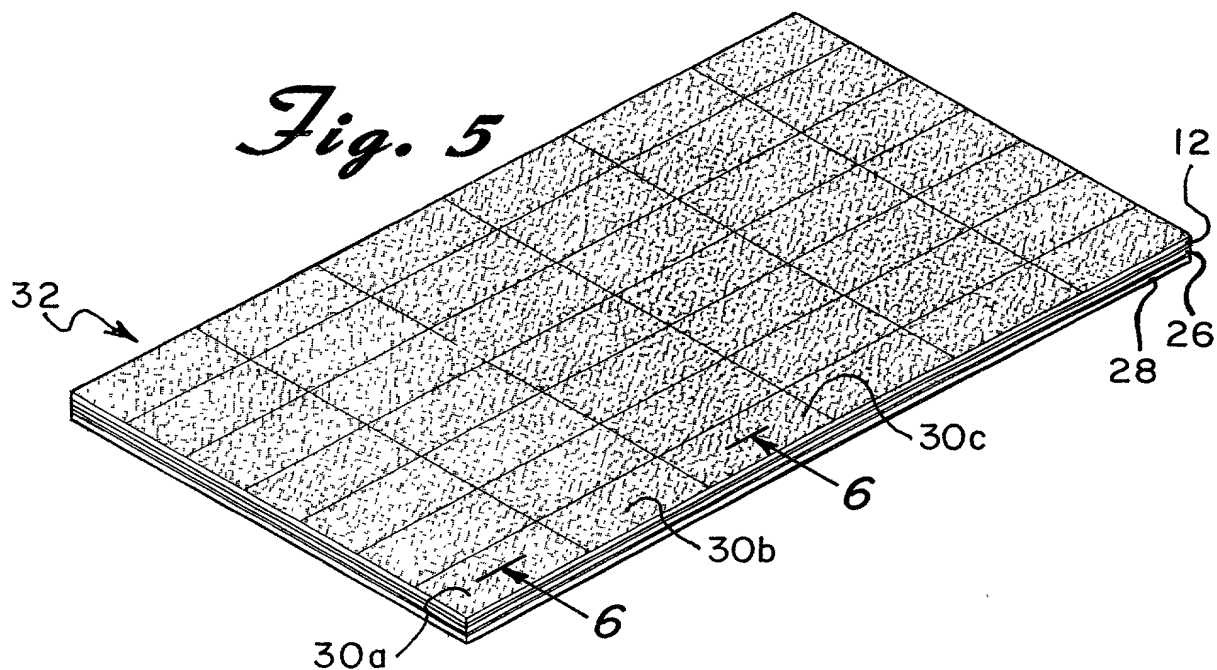
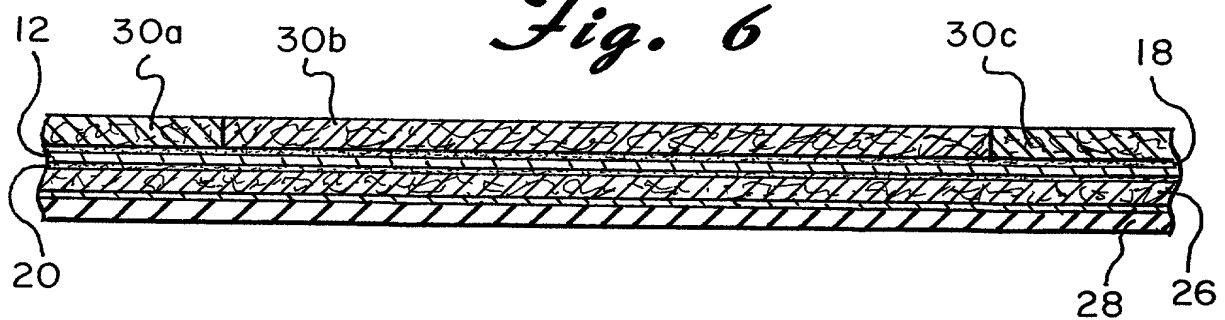


Fig. 6



DECLARATION

I, Frank Pelosi, Jr., hereby declare that:

I am a citizen of the United States, residing in Moorestown, New Jersey, and having a post office address of 625 East Chapel Avenue, Cherry Hill, New Jersey 08034.

I believe I am the original, first and sole inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled "Dimensionally Stable Adhesive Floor Covering System," the specification of which is attached hereto.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, Section 1.56(a).

I have not previously filed any foreign applications for patent or inventor's certificate.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

POWER OF ATTORNEY

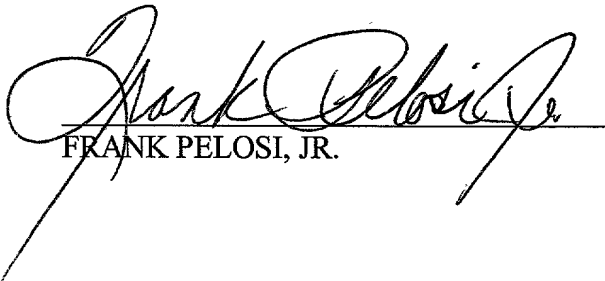
I hereby appoint Norman E. Lehrer, Registration No. 26,561 and Vanitha M. Elgart, Registration No. 41,445, whose address is 1205 North Kings Highway, Cherry Hill, New Jersey 08034, and whose telephone number is 856-429-4100, as my attorneys with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith.

PETITION

Wherefore I pray that Letters Patent be granted to me for the invention or discovery described and claimed in the foregoing specification and claims, and I hereby subscribe my name to the foregoing specification and claims, declaration, power of attorney and this petition.

Dated: _____

2/1/99


FRANK PELOSI, JR.

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